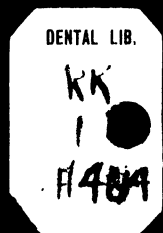
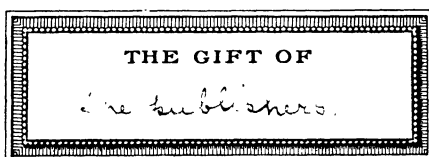
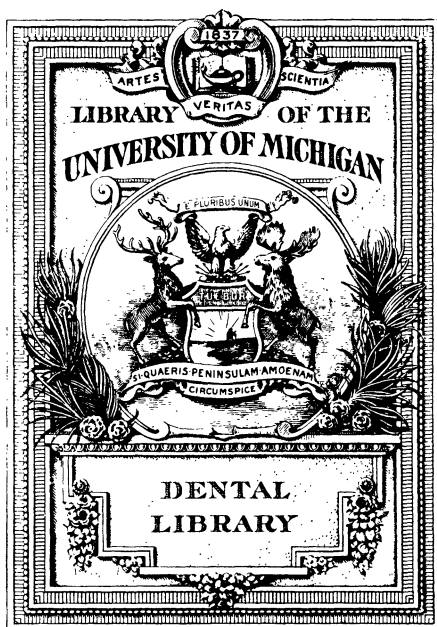


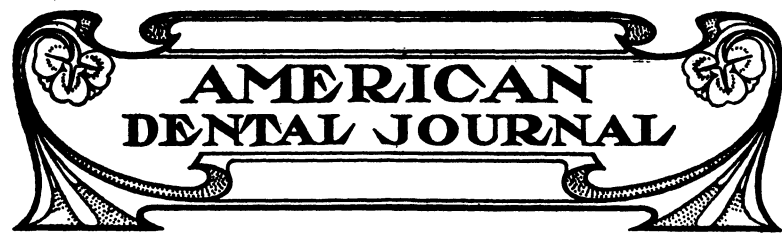
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OUR POST GRADUATE COURSE

OPERATIVE DENTISTRY.

BY R. B. TULLER, D. D. S.

THE OLD, OLD QUESTION—AMALGAM FILLINGS.

With all the great strides made in dentistry for many years we have not got away from amalgam as a very satisfactory filling material under certain circumstances and conditions. If we were all as expert as some operators we may know or hear of, there might be some hesitancy in admitting that amalgam is a fit filling for an operator to use, or any person to have put in his or her mouth. But the facts are, we are not all exceptionally expert in manipulative ability (though no one really wants to admit it), and amalgam is still with us in large quantities and not altogether abandoned by some of the very best dentists; and we all know that good amalgam fillings have preserved teeth for well nigh a life time.

My father was a dentist and began when the only gold used was what is often referred to as soft foil; or in more correct terms, non-cohesive gold; and amalgams were very largely made by each dentist combining metals by his own formula, or one recommended by some brother dentist; though in those days a great deal of secrecy prevailed, and many dentists were chary about disclosing any choice formula for anything, or their methods or process along any line of their work. There were but few—very few dental magazines in circulation, and the formulas they gave, especially for making up an amalgam, were, as we know today, entirely unscientific and untested by any such means as are now employed. And yet those things, some of them, preserved teeth; and that, too, with very crude and inefficient means of preparing cavities and eliminating decay. A few years ago I was shown some amalgam fillings put in by my father that had stood and preserved the teeth for about 50 years.

And here was father's formula for making up an amalgam, the

same followed by many dentists of that day. He would take a silver coin and file it over a piece of paper until he had as much as he thought he would need, and then from a block of pure tin he would add, I think, about half as much of tin filings, making a combination, by guess, of about two-thirds coin silver to one-third tin.

Now, commercial mercury, or quick silver, so-called then, was added from a little chamois pouch or bag, secured at the open end by a tightly tied string, by squeezing the pouch and forcing the mercury through the pores of the skin in hundreds of minute little drops, a process that was claimed to purify the mercury. Certainly there was left behind, in the pouch, a considerable quantity of black dust which would be emptied out when the pouch needed refilling with mercury. The silver and tin filings were then incorporated with the mercury as we do now, but always in the palm of the hands, and the excess of mercury was squeezed out through a bit of chamois skin. The consistency was always soft enough to be readily plastered into a cavity, but I remember my father used to finish up the insertion by adding some that had been squeezed as dry as he could get it, a process that I, many years after, adopted with a great deal of satisfaction; and I believe it a good process. Some operators place a great deal of emphasis on putting in amalgam very dry, which is a difficult proposition, especially in an upper tooth when it is dry enough to readily crumble and scatter. And then to manipulate such a dry material requires about as much time, patience and skill as to insert gold. It was not an easy matter to adapt dry amalgam to the walls of a cavity, and I hold that it is better to use a little that is really plastic at first, and in forcing in the drier after, the surplus of soft, or the mercury that makes it too soft, is forced to the surface and can be removed, following again with the drier mix until there is no soft surplus. In that way I feel more sure of perfect contact to all cavity walls and believe I can get my entire filling uniform in consistency and as dry, or as free of mercury as need be. Experience is quite as good a teacher—with some people—as theory.

My reference to making up amalgams by filing coins and block tin is not done with any suggestion that that is a good way to follow in these days, when we can secure amalgams that are made by true and tried scientific rules that have been put to numerous tests for all qualities desired in such a filling, such as shrinking or non-shrink-

ing qualities, which in the old days was not very carefully considered.

We all know, who have had any experience in practice at all, how amalgam has helped us out in putting many old broken down molars and bicuspid into good usable shape for years, that otherwise, in the light we had then, would have been sacrificed to the forceps. Later came the gold shell crown to help us out with these broken down teeth, but in the light years' of experience it is doubtful if they have not done more harm than good, and especially in the hands of the indifferent, careless or unskillful operator. In fact, the gold crown craze ran into such monstrous inconsistencies on the part of unwise patients and unscrupulous practitioners that they were used where there was no excuse in reason for them at all; where amalgam would have, in common sense, been preferable every way, and they have been used on exposed teeth with such offensive disregard to cosmetic and aesthetic appearances as to be an abomination, and a disgrace to the operators who stooped to cater to such an unnatural craving for noisome glitter. In fact, the dentist was too often the one to urge the unartistic, not to say absolutely diabolical display, of gold crown and solid gold tooth bridges in the front of the mouth. I have seen fine amalgam fillings in front teeth, that being kept clean and polished by the wearer, looked a thousand times more like nature's handiwork than such caricatures as gold has often made. But no one has any inclination or ambition to display amalgam work, and so one rarely sees in these days amalgam fillings in front, though it was not uncommon some thirty and forty years ago; and even those, black as they got mostly in a short time, were aesthetically ahead of many of the gold monstrosities of later years.

Dentistry, a liberal profession, as it lays claim to be, owes a duty to all classes of suffering humanity, as concerns the teeth, and it owes it in something more than the extraction of those important organs that become defective and inflicted with agonizing pains. We owe it to the children of all classes, the poor as well as those able to pay our usual fees; and there is a working of the leaven in that direction in the profession all over the country. The time will come when the needy poor, or surely the children of the needy poor, will be as properly cared for as their enlisted cooperation will permit of; for little can be done even for their good without their willing cooperation. In the course of time, enacted laws may, under board of health

regulations, compel children permitted to enter schools, or their parents, to care for their teeth in some prescribed manner that will benefit all concerned—benefit humanity when the scope of such work and effort is broad enough, for teeth in good order are being recognized more than heretofore as very important and essential to good health generally.

Now, free medical dispensaries, where medical advice and treatment and medicine may be obtained, are pretty well established all over the civilized world at large centers of population, and they are largely efficient as helps to needy suffering people; but medical treatment in the main can be given to large numbers of people without too great a tax upon the medical practitioner in the personal attention he may be called upon to give in operating of these dispensing institutions, where it can be readily seen the same could not be done by dentists in the same ready manner and serving many patients because of the time required. Filling teeth takes time and skill. The medical men diagnose the cases presented and, in the main, give advice and write prescriptions. Of course, there are exceptions, and many difficult cases present that the above does not apply to; but then there are also hospitals where those in need are taken.

In the conduct of a free dental infirmary, or otherwise, where many must be attended to, the proper diagnostic attention means the consumption of some time, and if treatment is necessary, first, there must be provided the proper outfit and furnishings to do the work, and then hours of time and close personal attention and skill of an operator are necessary to handle perhaps not more than one or two patients.

Then comes the question of materials for filling. When permanent work is considered, what material have we so all-sufficient, or nearly no, as amalgam for tooth repair in such cases?

The preparation of cavities may, perhaps, be considered about the same in most all cases. The decay must be thoroughly removed and retentive shape given to the chamber that is to receive the filling. If there is any difference as to time required and difficulty, it is in favor of amalgam, and it would seem to be a safe assertion to make, that the greatest good to the greatest number along this line could be done with amalgam, more than any other filling material we know of. If this is true in such a case, it is also true of many cases of large gen-

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much trouble. It had the disadvantage of making the apparatus more cumbersome to use and the ethyl chloride tube often suffered if there was much struggling on the part of the patient. During the past eighteen months I have simply contented myself with running the required amount of ethyl chloride into the ether chamber while the indicator is at (O). When the mask is on the face, the indicator is turned to (2k), and kept there until the patient is under. As regards the dose, from $2\frac{1}{2}$ — $3\frac{1}{2}$ c. c. is required for children, and 5—7 c. c. for adults. The dose introduced into the ether chamber, however, is not so important as long as the stage of anæsthesia is recognized, and the mask removed when the patient is under. From 30-45 seconds is the average time required for anæsthesia to become complete. If the patient refuses to breathe or is an alcoholic the time required is much longer. Complete anæsthesia is recognized by the immobility of the patient, by the stertorous breathing, the dilatation of the pupil and the absence of the corneal reflex. Just before this stage is reached there is generally great slowing of the pulse, frequently in children I have seen it less than (20) per minute. If the anæsthetic is given properly there should be no cyanosis, and this condition of affairs is helped by taking the mask slightly off the face at least twice during the administration, so that the patient may obtain a certain amount of air. I have never given the anæsthetic in any but the recumbent position, and would strongly advise this position in all dental work with this anæsthetic. It is important to have all the clothes about the neck and waist quite loose. As in chloroform or ether narcosis the anæsthetic is best taken when the stomach is empty.

In only two cases have I seen unfavorable symptoms, and these were due in my opinion to an overdose. Of course with an anæsthetic such as ethyl chloride where one breath may make all the difference between incomplete and deep anæsthesia it is hardly necessary to emphasize the need for extreme watchfulness on the part of the anæsthetist. If too little is given the patient is out of the anæsthetic and struggling before the operation is half over; if too much is given we get that extreme cyanosis and partial asphyxia which is a source both of danger to the patient and of anxiety and delay to the operator. Briefly the following are in my opinion the advantages and disadvantages of ethyl chloride as an anæsthetic in dental work. Among the chief advantages are:

(i) The portability of the apparatus required as compared with that required for nitrous oxide anæsthesia. All that is wanted is a Clover's inhaler, a hypodermic syringe, and a tube of ethyl chloride.

(ii) The rapidity with which anæsthesia is induced. In children who cry when the mask is put on the face this is especially noticeable. In two or three breaths they are unconscious. As a preliminary to ether it does away with all the unpleasantness attached to the initial stages of that anæsthetic, and a patient can be got under ether in one quarter of the time that ether would take alone.

(iii) The duration of anæsthesia compared with time taken to induce it is worthy of note. From 2—3 minutes is an average time. On two occasions I have seen eight different teeth drawn after the administration of 5 c. c., and I have been assured by the operators on these occasions that they could have taken out ten teeth before the patient was out of the anæsthetic.

(iv) The absence of bad after results. Five minutes after the administration of ethyl chloride the patient is able to talk rationally, and half an hour afterwards is able to walk about. After ether or chloroform anæsthesia it is usually some hours before the patient is able to look after himself and in the meantime he is vomiting almost incessantly. With ethyl chloride vomiting is rare if the stomach is empty at the time of operation. When an operation is done at a dentist's room these points are of importance as it means that the patient can be safely dismissed within half an hour of the administration of the anæsthetic.

(v) The safety of the anæsthetic. As regards mortality ethyl chloride is placed between nitrous oxide gas and ether. In my opinion, however, it is futile to compare mortality rates between anæsthetics that have been in use many years and those that are of recent origin. The greatest factor in the successful administration of anæsthetics is experience, and I venture to predict that in ten years time the mortality due to ethyl chloride will not be any greater than that due to nitrous oxide gas.

(vi) The ease with which a second or third dose can be administered if required. Very often with a refractory stump it is found that the patient is coming out before the operation is completed. The ease and rapidity with which a second or third dose of ethyl chloride can be given is to my mind a very important factor in determining its more general use.

Among the disadvantages I would mention:

(i) The struggling during the preliminary stages of anæsthesia. In adults, apart from alcoholics, if the anæsthetic is given carefully and a breath of air allowed once or twice, this is rare. In children it is often necessary to restrain the arms and legs during the early stages of administration. The short time involved in inducing anæsthesia makes this restraint a purely momentary necessity.

(ii) The spasm of the jaw muscles which is often attendant on complete anæsthesia. This spasm in my experience is present in a degree likely to cause trouble in about 25 per cent of the cases. It makes the introduction of a gag difficult in children without injury to the temporary teeth. The trouble may be obviated by placing a short dental prop between the jaws before anæsthesia is commenced.

(iii) The cessation of breathing during the preliminary stages. This is very noticeable in children after the period of excitement and struggling has ceased. Sometimes from 15—25 seconds the patient will not breathe. This condition is best met by raising the mask off the face and stimulating respiration by tickling movements made over the lower ribs.

In summing up I should say that ethyl chloride is a very valuable anæsthetic in dental operations requiring less than three minutes to perform, that in skilled hands it is very safe, and that its many advantages claim for it a permanent place among the comparatively few drugs which we have for the relief of pain during surgical work.—*Commonwealth Dental Review.*

ORIGINAL CONTRIBUTIONS

WHY CAST?

The following method of gold work is dedicated chiefly to those whom the casting process appears to be the only correct method of curing accurate fits with perfect margins and to those who are of the (?) fuss and muss connected with that method. To the man who does not feel that he should take \$110 from the family fund to purchase a new lease on modern dental practice or pay \$50 for the up to date (diploma) which is warranted to relieve his mind of the threatened practice invasion and investigation.

The writer has been practicing this method and finds casting unnecessary. The time consumed is less and the work may be finished in one sitting or as in casting the patient may be dismissed while the piece is finished at leisure. Margins can always be right. While in casting they are sometimes just dull enough to not warrant setting aside and yet when placed, do not show the desired close fit. Bubbles do not creep in, producing elevations, sometimes difficult to find and reduce. Articulating surfaces may be closely defined and no more grinding is necessary than with the average cast inlay.

The first step in the process is the preparation of the gold which may be treated in any quantity desired and kept in readiness. Moss fibre or any preparation of gold equally spongy will do. Mix a small quantity of cocoanut oil with resin sufficient to make a gum that will not quite run when cool. This is done by heating the resin and adding oil q. s. With a flat instrument, carry threads of the string gum over the mat of sponge gold sufficiently close together so that when melted, the entire surface will be pretty well permeated. The tendency is to get too much gum in the gold. Place the gold mat on a surface which can be evenly heated and bring it to a temperature where the gum will smoke—then remove. Care should be taken to prevent the gold in any part becoming red hot as that will make it granular. The object in using the gum is to render the gold slightly sticky even in presence of moisture and also to retain a degree of porosity in the gold after it is burned out.

Next to be considered is a piece of pure plate gold very thin. No. .002 SSSG. is used satisfactorily. The cavity is prepared in the same way as for any inlay filling. In large fillings a piece of paper is trimmed to size for pattern and the gold plate cut to it. To conserve gold, the cavity if too deep, may be partly filled with cement or other suitable material. The gold plate is then placed over the cavity and pressed to place with a wet pellet of cotton, remove gold and anneal and press in a second time, it makes no difference if the bottom of the gold tears. Select a piece of treated sponge gold in bulk several times larger than the space to be filled and with a large burnisher, force the gold cavity full and compact. If less than necessary, it may be trimmed away with a warm instrument—if more is required it may be applied, the gum holding the piece where placed—if inclined to flake off heat, the instrument, dip in same light oil to prevent sticking and the piece may be pressed in position. If the cavity is in an occlusal surface, have the patient bite in the gold the same as if taking a wax impression of the cavity for a casting. An occlusion as correct may be procured with about as little trouble. If a compound cavity, use an ivory matrix as previously described, disengaging the clamp when the bite is to be taken. When complete, remove the entire piece for firing. Any number may be made ready at one time, the same as with wax models. For simple cavities with walls sufficiently sloped outward a gold matrix may not be necessary. Oil the cavity and press the spongy gold tightly to place leaving the cavity slightly over full. To remove heat, a sharp pointed explorer and drive in the center of the mass. Cool with water and the gold will come out in one piece. Coat the cavity surface of the filling with casting instrument, taking care not to let any get on the surface in which the explorer is inserted. When the investment sets heat, the instrument near the filling and it will easily remove without disturbing the gold. The fillings with matrices do not require investing. Having the fillings ready for firing, we proceed as if baking a porcelain inlay. Place an asbestos mat or one of fire on the bottom of an electric or gasoline oven and place the filling in it, cavity side down, heat the pieces gradually to drive off the ——— hastened at first, the pieces will blister. Place on top of each filling, gold clippings of lower karat, the quantity of which the sponge ——— absorb without excess. A liquid surface, when melted, will indicate

that the sponge is satisfied. The instant the pieces are seen to melt, take the mat for examination. As long as rough surface is presented, gold is still unsatisfied and more pieces are required. The filling on matrices should have the surface to be cemented slightly roughened, rolling over them a small bur. The cementing process is the same as the other inlay process and need not be described here. Bridges are made of similar manner to fillings. The difference between the wax model and the gold constructed one is that when the former is complete, there yet remains the investing, time for setting and drying out before the actual casting has begun. When the latter is complete, the piece is half done and only requires the melting in of the gold. The same method applies to making gold plates and retaining appliances. Pure gold matrices of thicker gold than for inlays are used. Up to the present time, the broad flame of a blow torch has been used by the writer owing to the pieces being too cumbersome to enter a small furnace. To prevent warping, the matrix must be pinned to the model. Pins may be made of platine iridium wire bent short and sharply at one end to act as a head. The pins should be distributed around the matrix as the case demands. 22 K. gold plate or solder may be used to build up by cutting in narrow strips and covering the matrix and being sweated on. A plate or appliance constructed in this manner accurately fits the case when complete. The material entering the construction of a model for the purpose is fine asbestos fiber 1 part, silicon 3 parts, plaster of Paris 4 parts.

Fredus A. Thurston D. D. S.

1361 E. 57th Street,
Chicago

A FORGOTTEN COUNTRY GRAVEYARD.

In Canning, a hamlet on hills and in hollow,
Divided in twain by the wide winding Nith
Is a spot fenced round where only the swallow,
The cat-bird and thrush come, and birds of a kith.

A once hallow'd place of an acre or twain,
Where they who once saw and spake now are dumb,
Through the long sleeping years they've quietly lain.
Caring naught for the seasons that go and come.

Once there was weeping, once there was laughter,
For mourners and lovers alike came hither.
Some lie here waiting the long hereafter,
Others lie westward, or southward?—or whither?

The old gray roadway is "blind and stifled,"
That turns up a hill none care to climb,
To the place of the dead, "that the years have rifled,"
Leaving weeds and briars "that are touched not of time."

The old fence creaks, and a loosened picket
And a sliver answer the west wind's breath,
And sere leaves moan in a brushwood thicket,
In a round where life seems barren as death.

"Weeds, briars and thorns of the wild ground growing,
While the sun and the rain live these shall be;"
For they ever thrive without man's sowing,
And will until there be no more sea.

"Here death may deal not again forever;
Here change may come not till all change end,"
The graves they have made may be cared for never,
While time shall last, or till deep rocks rend.

J. D. ROBERTSON,

TOOTHsome TOPICS.

BY R. B. TULLER.

A TRUE LITTLE STORY.

Once there was a dentist, and his wife, and they had a little boy.

This may seem odd, but it is true. The little boy had an auntie—a good one, that thought there never was such a boy before. Maybe the pa and ma had some such notions, too. That's another strange thing, too.

The boy certainly held up his end pretty well—for a mere boy. And he was a lovable little boy at that.

This aunt used to gather the little boy in her arms and tote him around the room showing him the pictures on the walls, and try to enlighten his little understanding—for he was a very little chap yet, not quite able to talk plainly—as to what the pictures were designed to portray.

Of course, the auntie had to let herself down a little towards the little boy's understanding. He knew a tree when he saw it in a picture, and a dog and horse, and such things.

When they came to that beautiful steel engraving of "The Last Supper," where Jesus is depicted as the central figure among his disciples, she thought it due thus early to try to impress the little mind with the goodness, the gentleness and love of this central figure. And so the little fellow soon came to know and be able to point out Jesus, which he was many times called to do when visitors were present, to show how smart such a little boy could be. Auntie would say: "Now which one is Jesus? Put your finger on Him." Which he could do without mistake.

It happened one day when he was being carried about to point out the various objects that he knew in several pictures, that "The Last Supper" was passed for some reason; but the little boy would not so have it, and therefore tuned up his little voice with a good deal of baby energy and cried out: "Want to put pingey on Desus, want to put pingey on Desus!"

Now, what are you going to do with a little kid like that! Just had to let him do it, of course, and for many moons after his little "pingey" made a little mark on the glass every day, much to the distress of a scrupulously clean and tidy mother.

But now I come to a part of the story about this little boy—wonderful child!—that is most emphatically true. If it was not so, I would not presume to tell it. Being a very little boy, a little older now, to be sure, it does not smack in the least of anything profane, as it would if made up by some ingenious story teller. His daddy had a habit of telling him stories, often repeated, but never growing old to the little boy; and his auntie found that one particular story about a Newfoundland dog that saved the life of another little boy, when he fell in the pond near which he was playing, was as good and new always as a variety. And so it was repeated in exactly the same chain of events, until the little boy could take it up at any point if there chanced to be hesitation on the part of the teller, and fill in as seemed to him to be needed to retain exact continuity. Great kid!

Daddy came home one evening, worn and weary from putting in a cement filling (after his office girl had mixed it for him), and threw himself on a convenient lounge as he had very often done before. He did not, at that period, realize or know that during his war experience in the South, when in one or several battles, he laid flat and tried to sink into the ground to escape the danger of flying shot and shell, he probably took up a hookworm who, being pleased with his or her environment, has remained ever since.

But that is neither here nor there—or it may be here and not there any more—the point to be emphasized now—no, not of the hook—is, that the little boy clambered up and snuggling close to daddy, as was his custom, and said: “There, now, tell me a story, Daddy.”

But Daddy, for reasons just stated likely, did not feel equal to the task. So he said, “Now, see here, this is getting to be an old story. Suppose we change it and you, little boy, tell Daddy a story.” This proposition met favorable response, and the little boy started in: “Once there was a little boy, an’ he had a great big Newfoundland dog for a playmate; and dis little boy went down by the pond to play, an’ first he knew, he fell in. But his faithful dog was dere, an’ he jumped in an’ got the little boy by his kilts and pulled him out on the shore, and saved his life; an’ for which his pa an’ ma wouldn’t never sell that dog fer ’steen dollars or more.”

This was the logical end of the story, but Daddy asked: “Why,

is that all of it?" The little boy—his own little boy, not the one that fell into the water—fell into the trap, and immediately was fired with an ambition to amplify; and with frequent interested and leading exclamations from Daddy, this is what he truly told: "No, that isn't all. That little boy went playing round agin, an' he fell in agin. But his dog couldn't save him this time an'-an'-an' the little boy wuz drowned. Yep, an'-an' he went to Heaven. Yep, an'-an' he took the dog along with him." Then, unable to lie still in this exciting new part, he sat upright and with big eyes he continued: "An' say, Daddy, do you know, that when that dog saw Jesus he runned right up an' bit 'im on the leg."

Here Daddy showed excited interest and looked for something further, and it came. "Yep, he bit 'im; an' nen, an' nen Daddy, he saw God an' he took after him an' chased him all around Heaven, an' nearly scart the life out of him."

That little boy is now a full-fledged dentist, and has a little boy of his own. Where's he going to get off, I wonder?

TINCTURE OF EUCALYPTUS IN THE TREATMENT OF HEMORRHAGE.

(*L'Art Dentaire*, Bordeaux, August, 1909.)

M. White calls the attention of the profession on the value of this drug in cases of hemorrhage. He was called to see a patient who had been suffering for three days with a persistent hemorrhage from the extraction of a tooth. Tincture of eucalyptus was applied and the hemorrhage ceased almost immediately.

The following day, the sister of this same patient met with an accident on her foot which resulted in a profuse hemorrhage, which was instantly checked with an application of the same tincture which had been applied to her brother the day before.

In another instance, a hemorrhage which had persisted for over twelve hours following the application of leeches, after the usual hemostatics had failed to arrest the flow of blood (alum, tr. p. ferri, ice, etc.), when one application of tincture of eucalyptus produced hemostasia within five minutes without return.

The author advises to administer internally chloride of calcium in combination with the external use of the tincture of eucalyptus, which he claims will stop any variety of hemorrhage.



ABSTRACTS AND SELECTIONS.

BISMUTH PASTE IN THE TREATMENT OF PYORRHEA ALVEOLARIS AND SINUSES OF THE JAWS.

BY RUDOLPH BECK, D. D. S., CHICAGO, ILL.

(*Extract from Dental Review.*)

Notwithstanding the fact that here and abroad investigators have devoted so much attention and study to the subject of pyorrhea alveolaris, very little progress has been made in determining the true cause of this widespread affection, consequently no material or successful treatment has been achieved.

It is not necessary for me to review the literature on this subject, since the purpose of this paper is to present to the dental profession a new method of treatment for this affection.

The consensus of opinion among dental practitioners and teachers is that pyorrhea alveolaris is an inflammatory suppurative disease affecting the pericementum, which may be acute, but more often is chronic. The inflammation may extend to the alveolar walls and sockets, or breaking down of the alveolar sockets, and consequently a recession of the gums. When the teeth have lost their alveolar and gingival attachments, they fall out, and a spontaneous cure is the result.

The causes of pyorrhea alveolaris have been ascribed to constitutional as well as local conditions. Among the predisposing constitutional causes the principal ones are (1) hereditary influences; (2) arthritic diseases; (3) disease of suboxidation; (4) faulty elimination.

Of the local causes, the chief ones are: (1) Irritation due to deposits of foreign matter; (2) faulty use of the teeth and gums; (3) lack of cleanliness; (4) microbic invasion.

Professor Miller (1890) found 22 varieties of organisms in 26 cases examined and could not ascribe a specific factor to any one of them.

When we attempt to cure a severe case of pyorrhea alveolaris, we know how difficult it is. The failures are probably due to the fact that the seat of the disease is never reached by the methods now in vogue. At present our efforts are directed toward checking the pus discharge by removing all irritating material, either by scaling the deposits, brushing and polishing the teeth, as well as by injecting along the roots of the teeth such agents as lactic acid, trichloroacetic acid, aromatic sulphuric acid, saturated solution of iodine crystals in beechwood creosote, and various other antiseptic and astringent agents. Electricity in various forms, radium and X-rays, as well as the use of high frequency currents, with the view of stimulating sluggish circulation of the pericemental membrane, have likewise been employed with some degree of success. The use of bands and ligatures for the purpose of keeping the loose teeth in place serves only as an adjunct to the above method of treatment. The removal of useless teeth and their substitution by bridges has been very beneficial, since it removes at least certain sources of infection. With these aids, this affection could in most instances be kept in check and frequently a permanent cure effected, but in a proportion of cases recurrences will soon take place, and in very bad cases only temporary improvement can be expected.

My new method consists in the injection into the sockets of the affected gums of a warm liquefied paste, consisting of bismuth subnitrate and vaseline. The use of this paste suggested itself to me on observing the excellent results obtained by the employment of the same by Drs. Emil and Joseph Beck, in cases of old sinuses of joints and abscess cavities, as well as in the accessory sinuses of the head. I first employed this method in a case of chronic alveolar abscess with a fistulous opening where the roots had previously been filled and discharged pus for many years. Without any preparation the fistulous tract was injected with bismuth paste, and after one injection the fistula closed and remained so, causing no further trouble. This encouraged me to extend the experiment into another and perhaps more important field, namely, pyorrhea alveolaris. I selected a typical case of hematogenic pericementitis, which had been under my observation for nearly two years, and in which I had used the accepted methods of treatment with only temporary improvement.

In this case I proceeded as follows:

Without removing any of the deposits, I injected the bismuth paste into the pus pockets around every tooth involved. The next day patient returned and I scaled the deposits and reinjected the pockets with paste. When the patient returned five days later I found the gum tissue in a slightly inflamed condition; was unable, however, to force any pus from the sockets, and the patient felt more comfortable. I then reinjected for two days in succession, after which I did not see him for one month, when I made a careful examination and found the tissue in a healthy condition, although some of the teeth were still slightly loose, but most of them firmer in their sockets. Since then I have continued the use of this treatment in many cases, some more or less pronounced in character, and the results have been beyond my expectations. In some cases only three or four injections were necessary in order to prevent further pus formation. The majority of cases which I have treated up to date by the bismuth paste have either been cured or have shown signs of improvement, and in but a few cases has a recurrence taken place. I ascribed the failures to faulty technic, namely, that the paste did not reach every part of the infected area. When this fault was corrected satisfactory results were obtained.

FORMULA FOR BISMUTH PASTE.

Bismuth subnitrate	30%
White wax	5%
Paraffin (melting point)	5%
Vaseline	60%
Mix while boiling.	

INSTRUMENTS.

The most convenient for dental purposes is an all-metal syringe. The needle is flexible, with a fine tapering point, and should be of pure silver. The syringe should hold about half an ounce of the paste.

TECHNIC.

The point of the syringe, charged with the liquid paste, is introduced between the affected tooth and gum, and by gentle, steady pressure the paste is injected so as to reach the very bottom of the pus pocket. In this lies the great secret of success. The paste must

fill out all recesses or else the improvement will be only temporary. It is not necessary to attempt to remove any pus before the injection (but a smear should be made before the bismuth injection, in order to prove bacteriologic changes after a few treatments). At the second sitting deposits should be removed, and then the pockets reinjected. Fixation of the loose teeth in connection with this treatment should not be omitted.

HOW OFTEN TO INJECT.

This is to be determined by pathological conditions and symptoms present. I would suggest that in the beginning, in the treatment of pyorrhea, the injections be made at least every other day, until signs of improvement are noticed. Thereafter less frequently.

THEORY AS TO THE ACTION OF BISMUTH PASTE AFTER THE INJECTION INTO PUS POCKETS AND SINUSES.

According to the literature on this subject, either the bismuth or the nitrites coming in contact with the diseased tissues produce the invasion of leucocytes and changes in the connective tissue cells, which destroy the vegetable organisms, when the bacteria are destroyed and the process undergoes resolution, provided no foreign body—sequestrum—or necrosis be present. In more extensive cavities the bismuth paste may remain for several weeks, gradually disappearing by absorption.

DEFINITION OF CURE.

Whenever the sinuses or pus pockets in pyorrhea stop discharging pus and the mucous membrane appears healthy, we would call that a cure. A return to normal condition is not looked for, owing to the destructive process, like necrosis, adhesions and atrophy.

LIMITATIONS.

Surgeons and rhinologists point out certain dangers in the use of this paste. These dangers are:

1. Bismuth or nitrite poisoning, due to the absorption of large doses or bismuth and its nitrite.
2. Undue pressure on vital organs—brain, liver, pancreas.
3. Injection of paste into the circulation.

The practitioner of dentistry is fortunate in not being liable to encounter any of these, since his field of operation is confined principally to the oral cavity.

SINUSES AND FISTULAE.

I will omit the description of the etiology and pathology of the sinuses and refer the reader to the appended references to the application of the paste in these conditions in various parts of the body, including old sinuses of the head, which give in detail all phases of the subject.

I wish to briefly outline the technic employed in treating suppuration. In sinuses and fistulous openings of the chronic variety in the mouth, the roots of the teeth should be filled in the usual way, and through the external opening the sinus is injected with the liquid paste until it reaches all parts of the sinus. This is indicated by the external overflow. A finger is placed over the opening of the sinus until the paste becomes hard.

CONCLUSIONS.

1. The injection of a 33% bismuth-vaseline paste into the pockets of pyorrhea alveolaris is a remedy far superior to any heretofore employed.

2. The same paste injected into fistulae of chronic alveolar abscesses, or sinuses of the jaws, produces a rapid closure of the same, provided every recess of the sinus has been reached, and no sequestra are present. Tubercular sinuses are not excepted.

3. The secretions of the sinuses change their character after injection. They become serous and micro-organisms gradually diminish and finally disappear.

4. Bismuth subnitrate is a bactericidal and chemotactic substance, which is slowly absorbed and slowly eliminated.

5. By its retention in pus pockets and not being acted upon by the saliva, it prevents further infection and decomposition.

6. No serious complications due to bismuth absorption are to be anticipated, since 100 grams of the paste are rarely used. In larger doses it may produce symptoms of ulcerative stomatitis, with black borders around the gums.

7. As a dressing in cavities, it is preferable to any other, inasmuch as it promotes healing of chronic suppurations and rapid formation of granulations.

8. Other treatment (prophylaxis) in connection with the bismuth paste is necessary.

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THE RIGHT OF A DENTIST TO COMPENSATION.

BY J. HOWARD RHOADES.

There is, at the present time, an undoubted right, in physicians, surgeons and dentists, to recover compensation for services rendered, although by the common law all the fees of professional men, including lawyers, were honorary merely and not to be recovered by any mode of compulsion or suit.

This right of compensation may arise in either one of two ways, by either a direct agreement to perform certain services for a fixed price, which constitutes an *express* contract, or by a person placing himself in the hands of a dentist for professional service, in which case an *implied* contract arises.

As has been said, in an adjudicated case, "In the absence of a special contract, a person who places himself under the care of a physician, and of course the same rule applies to dentists, will be required to pay for the treatment the compensation shown by the evidence to be that ordinarily received by physicians under similar circumstances.

In the event of a patient and dentist coming to an express agreement for certain specified work to be done for a certain specified sum of money, the dentist can, in no event, recover more than the contract price, even though in performing the work more time and labor are expended than were anticipated by the dentist at the time he entered into the contract with his patient. The terms are fixed and cannot afterward be changed, except by a new express contract between the parties;—whereas in the case of work done under an implied contract the dentist may recover a fee based upon a "*quantum meruit*," that is, he may recover such sum as he is able to prove would be a reasonable charge for the work which he has done. When a patient accepts

the services of a dentist, he enters into an implied contract, in which it is agreed, on the one hand, that the dentist will render certain services suitable to his undertaking; and on the other hand, that the person who accepts the services will pay an adequate reward; fixed by the party of the first part, for the services rendered. If, in the case of an implied contract, the patient declines to pay, on the ground that the charge made is excessive, the dentist, in order to recover at law, must prove that the charge made is reasonable, and no more than his services are worth.

To sustain the charge, it is not sufficient for him to give his own testimony as to the reasonableness of the charge. He testifies to the work which he has performed and to the charge which he has made, and then he is obliged to call upon other members of his profession to testify that the charge made is a reasonable one and that they would have made the same charge for the same work. The jury, before whom the case is tried, is the sole judge, under the instruction of the court, as to the reasonableness of the charge.

The charges of professional men vary greatly, depending upon many circumstances, such as their reputation and experience, and the locality in which they practice their profession. An eminent practitioner, with an established reputation and longer experience can reasonably demand a larger fee, than a less experienced practitioner for the same service, because it is presumed that the patient employed the more eminent practitioner with a knowledge of this circumstance, and was willing to pay a higher price for the sake of having the advantage of the experience, rather than entrust the work to be done to a comparative novice.

The legal presumption is, that agreements and stipulations, made between the parties, such as fair and honest men ought to have made under like circumstances. The law presumes that the patient will pay the usual and ordinary charge for such services as are rendered, and it imposes upon both parties the duty of fulfilling the obligations incident to the contract. A contract between a dentist and his patient will be declared void, if fraud, on the part of either can be shown.

It is a principle of the general law of contracts, that fraud on the part of either of the contracting parties renders a contract, induced thereby, voidable at the option of the party misled thereby.

In order that such a contract may be avoided by the innocent party, he must disavow it promptly, or, as the law says, he must not be guilty of *laches*.. Immediately upon discovering the fraud he must declare his intention to cancel the contract or to abide by it.

The question of the right of a dentist to charge for time, not actually spent in operating upon a patient, yet set aside for him, by appointment, at his request, is a mooted one. The weight of authority is in favor of allowing such a charge to be made. The courts take the view that the acceptance of an appointment by a patient for a fixed time, with a dentist, raised an implied contract that the patient will pay for such time, if he fails to keep his appointment. No length of time being specified in the making of the appointment, it is usual to charge for an hour. This rule is a seasonable one, because a dentist necessarily relies upon his professional time for his support, and by a failure of a patient to keep an accepted appointment, the dentist is put to a pecuniary loss, by reason of the time wasted, if he is unable to fill it by work done for another patient. Of course it is only the legal aspect of the case we are considering. In some cases it might not be judicious to stand upon such legal right at the risk of losing a patient. It might be better to bear the small loss involved under such circumstances for the sake of retaining the patient.

There is a rule of law requiring a husband to furnish and pay for necessities for his wife and children and the same rule applies as between a guardian and his ward. Under this rule the services of a dentist are looked upon as necessities. When a married woman calls upon a dentist, with her children, and he professionally treats her and the children, she acts as the agent for her husband, and he is liable to pay for the services rendered. If a minor calls upon a dentist for professional services, it is wise for the dentist to communicate with the parent or guardian and contract with them or obtain their authority for the work, because if by them the services of a competent dentist are offered to the minor he cannot at a mere whim or fancy go to another dentist and throw the liability to pay for his work upon the parent or guardian.

Where a dentist sues to recover compensation for services rendered the patient may set up as a defense that the dentist did not use competent skill in the performance of the services, but his right to compensation does not depend upon whether or not he has success-

fully performed the work so as to effect a cure. It only depends upon the question of whether or not he has used due care and diligence. The success of a suit by a dentist to recover compensation will often depend upon the manner in which he has kept his accounts. He may be required in some cases to offer his books in evidence and it is very important that he should have for this purpose what is known as a book of original entries. This is, as the name implies, a book which contains the first or original entry or charge made against a patient upon a contract either express or implied, concerning merchandise sold, work and labor due or services rendered. The entries should be made upon the same day that the services are rendered, though sometimes a little more time is allowed. The account should be charged directly to the person who is to pay it, and should show dates, items and prices charged. The charges should never, in the books, be lumped under a heading of "professional services," though the bill rendered the patient may be so stated. If the patient decline to pay and it becomes necessary to prove the claim by the production of books in court, they must show an itemized account of what the "professional services" consisted, and should be as specific as possible. There should not be one charge for two or more fillings, or for several treatments, but they should be distinctly itemized. Failure to so keep books may result in their being excluded altogether as evidence, and even if they should be admitted, they are unsatisfactory in proving the services charged for.

In the case of a patient's death, occurring while he is indebted to his dentist, the law requires that a claim for services rendered to the decedent in his lifetime, shall be presented within one year from the date of his death to the executor or administrator of his estate, who is bound to give notice of his appointment. The next step to be taken in the collection of a claim in such a case, upon notification of the date set for the audit of the account of the executors or administrators by the Orphans' Court, unless the estate is solvent, and the account has been admitted to be correct, is to attend such audit prepared to prove your claim.

In proving claims for services in the case of death of the patient, properly kept books are of incalculable importance, as in most of the states, a claimant is not permitted to testify against a person who is dead, and the claim must be proved by the production of books and

papers or by the proof of the admissions of the decedent made in his lifetime to some person other than the claimant. It is not absolutely necessary that the entries in the books which are produced should be such as are generally understood; if they are intelligible to other dentists and are supported by evidence of their meaning. It is quite customary for professional men to use books in which certain signs and symbols are used and while this method of keeping books may be a great convenience and time saver, yet such books cannot be considered as books of original entry and it is well to avoid the use of such method of bookkeeping.

Books of original entry constitute evidence made by the party himself who is seeking to recover upon entries found therein, and as frequently they cannot be tested by other proof, they are to be received in a guarded manner and there is all the more reason for care and accuracy in making the entries.—(*The Garretsonian.*)

GINGIVITIS.*

BY FRANK L. PLATT, D. D. S.

The practice of dentistry, aside from its purely mechanical aspect, embraced under the general title prosthetic dentistry, is confined to four subjects: dental caries, lesions of the dental pulp, orthodontia, and gingivitis in its various forms.

Associated with all of these, of course, are the subjects of prophylaxis and dental esthetics.

The greater part of the general practice of dentistry is devoted to the treatment of dental caries, the treatment consisting almost entirely of filling cavities of decay by means of gold or plastic filling materials or gold or porcelain inlays; the treatment of pulp lesions being an incident closely related in the majority of cases with the preparation of carious teeth for the reception of filling materials. Orthodontia has passed, as it undoubtedly should, very largely into the hands of specialists, who are equipped by education and training for the practice of this notable specialty of dentistry.

*Read before the San Francisco Dental Association, June, 1909.

The fourth subject mentioned, gingivitis, judging from experience and the observation of oral conditions in many patients from many practitioners, seems to be a subject the importance of which is little appreciated and much under-estimated by the average dentist.

Too much of his time is taken up by the repair of the teeth, the integrity of which has been impaired by the ravages of caries, and far too little attention is paid to their environment and the health of the tissues in which they are placed.

It is an accepted fact that in a healthy mouth, one with well cleaned teeth, with firm, pink gums, one to which the "dark brown taste" and fetid breath are strangers, dental caries is comparatively rare. Why, then, is so much of our time occupied with filling cavities and so little spent in producing conditions which will at least inhibit their formation and progress.

Is it not time that every dentist should aspire to be more than an artisan, devoting his skill and energy to the repair of broken objects? Is it not time that the study of the prevention of disease be given its proper place in the dental curriculum and a dentist's first duty be taught to be placing the mouths of his patients in a clean, healthy condition?

It is not the purpose of this paper to present a sermon on oral prophylaxis, but oral prophylaxis and gingivitis are so closely related that in calling attention to the prevalence, the frightful destructiveness and general importance of the latter the former must be mentioned as its ever-present corollary. Gingivitis in its varied forms and stages presents a subjects of grave importance and one that is second to none in its relation to the general and dental health of our patients. Its definition, inflammation of the gums, carries with it no intimation of its real significance and sounds no warning of the results its unarrested progress may achieve. Gingivitis is divided into two classes, marginal and interstitial, the former confined to the margins of the gums, the latter being characterized by an excessive number of leukocytes in the pericementum and gum tissue.

The marginal form of gingivitis may give but little inconvenience, but if neglected may develop into the second class, interstitial gingivitis, leading to atrophy of the gums and alveolar process, cervical decay, the exposure of hypersensitive cementum, the loosening of the teeth and that great bane of dentistry, pyorrhea alveolaris.

The causes of gingivitis are either general or local; among the former are the abuse of mercury, indigestion, constipation rheumatic and gouty conditions, renal disease, faulty metabolism, or any condition causing an insufficient elimination of the waste products of the digestive and nutritive functions. The local causes are unclean conditions of the teeth, accumulations of salivary calculus, ill-fitting crowns and bridges, rough, unfinished fillings, either overlapping cavity margins or not quite filling the cavities, the impaction of food debris between the teeth, misfit clasps and the pressure of partial dentures at the gingival border of remaining teeth. The late Dr. Garretson in speaking of inflammation, said it was a disturbance of the equilibrium of the circulation; its treatment consisted of the removal of the cause of the disturbance, its cure resting in the restoration of the equilibrium.

The truth of this proposition being accepted, our first interest lies in the determination of the cause of the disease, and as most cases of gingivitis are of local origin, the first step toward its treatment in the careful and thorough removal of all the local conditions which might produce it.

Some writers have expressed an objection to the term "cleaning teeth," and have suggested that we use "dental prophylaxis" instead. The latter is, perhaps, a more refined expression, and maybe some patients will pay more to have their teeth "prophylacted" than they will have to have them cleaned; the mental effect of the term used is also worthy of consideration, but in any event let us remove every cause of local irritation from each individual tooth, crown, bridge or plate, as the case may be. This is best accomplished by treating the oral cavity as a hospital ward containing from a few to thirty-two patients, each in need of individual attention. Examine each tooth separately, and carefully remove from it with small, sharp, suitable-shaped instruments every particle of calculus which can be removed by instrumentation; polish every rough filling; remove every misfit crown, if you can make a better one; fill flush and smooth every open cavity; with powdered pumice and orange wood points or brushes and rubber discs or cups propelled by the dental engine polish the surfaces of the teeth which can be reached by such appliances, then with wide waxed floss silk and pumice polish the approximal and cervical surfaces. During this process have the patient fre-

quently rinse the mouth with warm water made antiseptic by your favorite mouth wash and finally by the use of the atomizer thoroughly wash from between and around the teeth every trace of polishing powder or loosened calculus which may not have been washed out by the patient.

All this must be done with as little wounding of the tissues as possible, and it is not necessary to tear a patient's gums quite all to pieces to remove calculus even from far below the cervical border.

If the gingival inflammation has progressed to the pyorrheal stage, or near it, two new remedies may be mentioned which promise much in its treatment, ammonium fluoride, or tartar solvent, suggested by Dr. Jos. Head, and pyorrhocide and dentinol, a powder and fluid manufactured by the National Dental Co. of Newark, N. J.

If the disease is of purely local origin the treatment suggested followed by careful daily cleansing with the use of suitable powders, pastes, brushes and washes on the part of the patient will effect a cure. If constitutional causes exist it is questionable in the present state of dental practice if the cure of the disease should be left wholly in the hands of the dentist. He may, of course, by questioning the patient, determine as far as possible the particular systemic derangement which may exist, but on general principles the patient should be referred to a good physician for systemic treatment.

The dentist may, however, safely recommend an increase in the amount of water drunk daily by the patient, and such changes in diet as in his judgment will be of benefit in the digestive process.

In chronic cases of gingivitis massage of the gums is of considerable benefit and vibratory massage may yet prove to be a very efficient part of the treatment. But whatever auxiliary treatment may be adopted the principle which must be observed first, last and all the time, is cleanliness, the positive removal of local irritation of every kind, and the attempt must be made to impress upon the patient the dangers of allowing the disease to go unchecked and that he must do his part in its treatment and cure.—(*Pacific Dental Gazette.*)

A PERMANENT RETAINER FOR THE SIX INFERIOR ANTERIOR TEETH.*

BY DR. G. H. WALKER.

For every manner of mechanical or operative procedure there are some things, aside from knowledge of that particular process that are necessary for its accomplishment. We must have the mechanical equipment with which to do the work.

For this retainer I have devised a few instruments which simplify the work very materially.

The principal one is the die plate. This has three small holes; No. 1 is at first cylindrical and about No. 15 in size, being beveled at the bottom the same as the cone shaped burr, and continuing through the plate as a hole No. 20 gauge.

No. 2 is simply the bevel and the continuing hole No. 20, and No. 3 is a hole No. 20.

A swaging point which fills the cylinder portion of No. 1 is also necessary.

The other instruments nearly every dentist has in his cabinet. They are the threading instruments and cone shaped burr, which come with the Bryant repair outfit, and two small taps made by S. S. W. and two small drills No. 20 and No. 21.

With these instruments and a case to work on you are ready to proceed with the making of the appliance. This retainer consists of a gold backing for the teeth to be supported, with a small threaded hole for each tooth included, and a threaded platino-iridium wire No. 20 with beveled heads for each tooth included.

The first step in the work is the proper alignment of the teeth, paying attention to the articulation that the teeth may receive no undue pressure.

It is not necessary, however, to have the teeth parallel or to have their surface occupy the same planes. After the teeth are properly placed, ligate for temporary support, and thoroughly cleanse the surface to be covered by the retainer only. Next drill one small hole, No. 20, in the center of the tooth midway between the pulp and incisive edge. It is not necessary for these holes to be parallel in any

*Read before the Los Angeles County Dental Society, May, 1909.

direction, as for other retainers, hence this work may be done with ease by one not having a good eye to guide him.

After these holes are drilled take the cone shaped burr and countersink the anterior opening slightly, and you have completed the necessary work on the teeth.

TAKING IMPRESSION.

An impression in compound is then taken of the lingual surface of the teeth to be retained. In taking this impression in compound first get merely an outline of the teeth, then chill the material thoroughly. Then warm the tooth surface *only* and gently but firmly press to place, allowing it to go between the teeth, and carefully support with the other hand any teeth which push forward or out of line; then chill thoroughly and remove. If it is desired to place the finished piece at one sitting an impression in wax may be carved and a casting made from that, but it is hard to carve this on the teeth. If time is allowed, the patient may now be dismissed, and a model made from the impression. On this model wax may be formed and carved to the desired thickness and a casting made in gold. The harder the gold the more rigid the finished piece will be, the thinner it can be made and the better the pins will hold. In carving the wax it should be allowed to run between the teeth for a short distance, should be thin at the edges and slightly thicker opposite the holes in the teeth.

After the casting is made it should be pickled and polished and put aside until ready to set.

THE PINS.

The pins are made of No. 20 platino-iridium wire as stated, and are very easy to make. A length of wire is used and the end threaded enough for one pin. It is then covered with whiting or rouge all but the very tip, and on this tip a small bead of pure gold is fused. The wire is then cut to the desired length and placed in the first hole in the die plate, driven down into it with the swaging tool and then removed by tapping gently the other end of the pin on the bottom of the die plate. It is then placed in hole No. 2 on the die plate, and with a fine flat-sided file two opposite sides are filed flat. It can now be handled by any flat nosed plier or by a small wrench made for the purpose. The latter is much preferable, as it is very speedy when setting. The retainer is now ready to set in the mouth, save for the

drilling of the holes in the backing which is done as follows: Place a drill, size No. 21, in the engine and the backing on the teeth. Insert the drill into the holes in the teeth and drill through the backing. The holes in the tooth and backing are then in direct line, and there will be no trouble in setting the screws or pins. Then thread these holes with the small taps described. Now place the dam and wash the teeth thoroughly with warmed alcohol and try backing and pins to see if all is right. Then cement backing and pins and holes and put the backing carefully to place and quickly screw the pins home. After allowing the cement to set a few minutes a small wheel is used to cut off the projecting portions of the pin and the whole is polished and finished. The dam is then removed and any further scaling or polishing of the teeth may be done without interference from the retainer or danger to the teeth.

This appliance, like every other, is best suited to some particular conditions presenting, and should not be placed in every mouth regardless of conditions. For a case in which the line of the lower teeth, either four or six, is represented by a constant curve, or where the six anterior teeth are to be retained, the cuspids presenting the usual angle to the arch, this retainer is especially indicated for reasons which are very evident.

A case where the four incisors are to be retained and represent a nearly straight line, the appliance of Dr. W. H. Trueman may be substituted. However, I believe this appliance preferable in nearly every case. Neither of these appliances should ever be used in those cases which may at some time be able to stand alone, for they require the drilling of holes in the teeth, which come very awkward when removing an appliance.

The retainer I have described has so far seemed to answer all requirements, and been sufficiently strong and durable to place it first in my hands as a permanent retainer for the six inferior anterior teeth.—*Pacific Dental Gazette*.

TREATMENT OF EXPOSED PULPS AND REMAINS OF PULPS.

BY PROFESSOR DR. BERNARD, (GENEVA).

At the International Dental Congress held in Paris in 1889, I read a paper on the treatment of caries of the teeth, with exposed or partly exposed pulps. I ended the paper with the following:

Every pulp, and also pulp remains should be saved.

With the exception of certain particular cases, the use of arsenic should be discarded.

The nerve extractor is an instrument that may be used for anything else, but not for extracting pulps.

Complete antiseptic treatment is the foundation upon which to work.

The time when to place a metallic filling into a tooth with a capped pulp depends upon the duration of the disease before treatment.

Although I have nothing to add to the foregoing, new facts direct me to the subject again.

As every inflammation in whatever part of the economy is carefully observed and treated, the same should be done with a diseased or exposed pulp. The surgeon does not remove an eye for conjunctiva or cornea, nor does he amputate a finger on account of whitlow; then why save a pulp? Why not cure pulpitis?

The removal of the pulp may have serious consequences for the tooth, and may lead to its earlier or later destruction and loss. More rapidly when the probe has been passed through the end of the root, and carrying some of the bacteria with it.

Is it possible at any time to get a root-canal in a thoroughly aseptic condition? I doubt it.

With the treatment I wish to draw your attention to, all dangers and difficulties that may arise from the revitalizing of the pulps are removed. The technique of my conservation treatment is as follows:

Given a badly decayed tooth with an exposed pulp: Remove all decay with spoon-shaped excavators, being careful not to wound the pulp. Wash the cavity with an antiseptic solution of corrosive sublimate, 1 in 1,000, to which 1 in 200 resorcin has been added. It has been admitted that, with a mixture of several antiseptics, better results

are obtained in destroying germs, and these solutions with water are better than with alcohol. After the disinfection of the cavity is completed, a dressing is applied, but care must be exercised so that the dressing or covering of it does not extend beyond the margins of the cavity—to prevent pressure from the concluding teeth.

The dressing is a pellet of cotton saturated with an antiseptic resinous tincture of the consistency of syrup, preferably composed of:

Holland liquor	1 gr.
Resorcin	1 gr.
Very thick benzoe tincture.....	1 gr.

In combination with saliva, the benzoe tincture forms a precipitate which hermetically seals the margins of the cavity for a period of twenty-four hours to forty-eight hours, and sometimes even longer. This dressing is renewed, at first every day, then every other day, till about seven dressings have been applied. Before applying these dressings the cavity is washed out with the corrosive sublimate solution given above, and then dried. After about ten days, and if the tooth has been comfortable and if it has no unpleasant odor, a temporary filling is inserted, which is kept in for about a week. For temporary filling I generally use absorbent cotton dipped into sand-arac varnish or benzoe.

If the tooth has given no trouble, it is now ready for a definite filling. Into the washed and dried cavity, place a pellet of absorbent cotton dipped into iodo-gallate of bismuth; this is followed by a thin coating of a very thin mix cement, being careful to exert no pressure on the pulp. The remaining cement on the slab has now somewhat stiffened, and the cavity is filled with it.

A tooth treated in this manner is a saved tooth, and with the many I have treated, have no failure to report, to the satisfaction of my patients and myself.

Some time ago, I had the opportunity to remove the filling out of a tooth thus treated seven years ago. I found the pulp covered with a hardened layer resembling "secondary dentine. I filled the cavity again with amalgam, and it has been comfortable and satisfactory since.

I always instruct my patients to return after about two months, when I remove some of the cement and replace it with amalgam or gold.—(*The Dominion Dental Journal.*)

MISCELLANEOUS

CHECKING PORCELAIN FACINGS.

DR. P. S. STRUBLE, HOLYOKE, COLO.

During the two years I have been in practice I have continually used this method, and I cannot recall but one checked facing during that time. I heat the case slowly. Immediately after soldering I wait until the redness leaves the gold, then break away the investment and plunge the piece in sulphuric acid, then in water. I use but little caution in placing borax on the work in soldering, as I do not believe that borax will check the facings. I think rapid heating is the cause of most facings checking. Also, the careless bending of the pins. I never bend the pins.—*Western Dental Journal*.

THE MAN WHO DOESN'T TRY.

We can condone the failures of the man who makes an honest effort, yet comes short of the mark, but what shall we say of the man who doesn't or won't try? Many a man keeps out of orthodontia work simply because he doesn't want to attempt new difficulties, regardless of the fact that he is the only man available to many patients, who must grow up deformed and suffer for life just because he doesn't try. This is not right, according to modern standards of ethics.—*Dr. W. J. Brady, in Western Dental Journal*.

ROOT CANAL FILLING FOR TEMPORARY TEETH.

Dr. Henry Ferris, of Brooklyn, suggests a filling material which he finds meets the requirements for a good root canal filling material in temporary teeth. The formula he uses is: Isinglass, dr. 1; tannic acid, gr. i ss.; trikresol, m. iv; aqua distilled, dr. i. The mixture is heated to 100 degrees in a water bath. It becomes syrupy, and can be introduced into roots and covered with cement or gutta percha.—*S. G. Walton, Items*.

FOUR POINTS TO CONSIDER IN CAVITY PREPARATION IN GOLD INLAYS.

In the preparation of the cavity there are four points to consider: First, such form as will permit the withdrawal of the wall without distortion. Second, such form of the gingival or pulpal walls as will provide so firm a *seat* for the filling that it will not rock on its base. Third, such retention form as will provide resistance against such stresses as would tend to *inseat* the filling. Fourth, such form of enamel margins as will protect the enamel from fracture and give such marginal form to the inlay as will prevent change under stress. (Proximal cavities in bicuspid and molars are the ones considered here.)—Thos Weeks, *Brief*.

RULES IN CAVITY PREPARATION FOR PORCELAIN INLAYS.

(1) The force and direction of occlusion must be taken into consideration before beginning the preparation of the cavity; then, by grooves and angles, secure all the mechanical retention that is possible without forming undercuts. (2) The walls of the cavity should slightly diverge toward the margins. (3) The cavity should be as deep as conditions will permit, with the pulpal wall parallel to the plane of the surface on which the cavity is located. (4) All undercuts must be obliterated, so as to be able to withdraw the matrix without distorting it. (5) Frictional retention must be secured by having the pulpal wall as extensive as possible without forming undercuts. (6) Sufficient working space must be secured before beginning the operation.—J. W. Lyons, *Register*.

A ROOT CANAL FILLING MATERIAL.

I am indebted to Dr. Inglis for a root canal filling which, while I have not yet employed it in my practice, I think possibly comes nearer to being the ideal filling than any yet developed. It consists in adding to a solution of chloro-percha equal parts of paraform, thymol and eucalyptol, and then before using allow the chloroform to completely evaporate leaving a mass of semi-solid consistency. This is followed by gutta-percha canal points, and is believed to maintain its antiseptic strength and not to shrink, as is supposed to be the case with chloro-percha after the chloroform evaporates or disappears from the canal.—L. B. Lodge, *Summary*.

MAKING GOLD OR PLATINUM MATRICES QUICKLY AND WITHOUT PUNCTURE.

Use a medium weight China silk, instead of gold-beaters' skin, suggested by Dr. Emil Schreier, of Vienna, as the cradle support of gold or platinum matrices for inlays. The silk is an improvement on vellum, as it has greater bulk and better sustains the foil. The procedure is the following: The foil is cut sufficiently large to amply cover the prepared cavity, placed between a fold of silk, then dipped into water, and, with wet pellets of cotton, bibulous paper, or spunk, is quickly carried to the floor of the cavity, and swaged to form without fear or puncture. It is then taken from the cavity, the silk is carefully removed, and the matrix returned for completion by again swaging with pellets of cotton, bibulous paper, or spunk, but this time used dry, then completing the operation by filling with wax or gum camphor for safe removal.—E. S. Gaylord, *Dental Cosmos*.

CAVITY PREPARATION FOR PORCELAIN.

A cavity for porcelain should be prepared with all walls as nearly perpendicular as possible, with no beveled margins. The cervical wall, or floor, should be flat, and all decay and defects removed. The lingual wall must be cut back farther than the labial, so that the stress of mastication will have a tendency to force the filling into the cavity. We cannot depend entirely on the cement to hold the filling in place. If you do, of course it will fall out as soon as the cement washes away.—W. C. King, *Brief*.

A METHOD OF MAKING INLAY TO RESTORE THE CORNER OF A CENTRAL OR LATERAL.

After a matrix is invested in sump and dried, puncture the matrix with an instrument near the cutting edge—which will be the heaviest part of inlay—sufficiently to push through a little way an ordinary pin broken from a vulcanite tooth. After the pin is in and left sticking up in your matrix proceed to build up and bake as usual. Before setting cut enough from the tooth to allow room for pin and make an undercut. The inlay will never come out after set, unless broken.—A. C. Greenlee, *Summary*.

EUGENOL AND ZINC OXIDE.

I have spoken of my use of a paste of eugenol and zinc oxide. This is one of my main reliances, not only in the treatment of children's teeth, but also frequently those of adults. It is antiseptic, obtundent, soothing, and when incorporated with cotton and pressed into a cavity it will become quite hard and remain impervious to moisture and afford protection for weeks and months. A patient comes in, says a filling has dropped out (not yours, of course; some other fellow's), the cavity is annoying him; you cannot give him an appointment for a week or two, and you are busy at the chair. A little eugenic zinc oxide putty rolled up with a ball of cotton, which can be done in a few minutes, and stuffed into the cavity will relieve the situation until you can give him enough time to replace that other fellow's filling—properly!—Chas. B. Rohland. *The D. D. S.*

BISMUTH PASTE IN PYORRHEA.

Without removing any of the deposits, I injected the bismuth paste into the pus pocket around every tooth involved. The next day the patient returned, and I scaled the deposits and reinjected the pockets with paste. When the patient returned five days later I found the gum tissue in a slightly-inflamed condition; was unable, however, to force any pus from the sockets, and the patient felt more comfortable. I then reinjected for two days in succession, after which I did not see him for one month, when I made a careful examination and found the tissue in a healthy condition, although some of the teeth were still slightly loose, but most of them firmer in their sockets. Since then I have continued the use of this treatment in many cases, some more or less pronounced in character, and the results have been beyond my expectations. In some cases only three or four injections were necessary in order to prevent further pus formation. The majority of cases which I have treated up to date by the bismuth paste have either been cured or have shown signs of improvement, and in but a few cases has a recurrence taken place. I ascribed the failures to faulty technic, namely, that the paste did not reach every part of the infected area. When this fault was corrected satisfactory results were obtained.—*D. D. S.*

CASTING GOLD ON PORCELAIN.

At last I have been successful in casting against porcelain without checking. I use a flask, the dimensions of which are one and one-quarter inches in diameter and the same height. After coating wax with silex and plaster, I fill balance of flask with Brophy's imperial investment compound and after drying I place in a coal stove and leave till it is all red hot. Then it only takes a few minutes to melt gold and force home, and as there is quite a body of investment around the tooth, it has not time to cool before the gold comes in contact with it. I have made a four-tooth bridge by this method and all facings were intact.—E. Cunningham, *Dental Review*.

TECHNIQUE IN THE USE OF SILICATES.

The technique necessary to the making of a perfect filling of Ascher's Enamel is equal to that required for that of any material we have ever had. It is a very delicate process. It does not require a very elaborate lot of instruments, but they must be just right, and the materials must be handled just so, and a considerable amount of speed must be developed to enable one to get the material into a cavity of any considerable size before the cement becomes too hard to allow of drawing it to the borders of the cavity. This must be accomplished before the setting has begun, else, in drawing the cement to the border, the whole mass is likely to be disturbed and so leave some other border unfilled. Such a mistake might give rise to the belief that the product had shrunk after a few days.

The ideal way would be to put as nearly as possible the exact amount of cement into the cavity and then burnish under celluloid. It has not been my good fortune to get the exact amount very often, but, if one is careful not to use too coarse discs or strips in cutting down to nearly the desired surface the finer strips and discs will cut the filling down to a very nice surface.—L. P. Hall, *Register*.

Do you run with the hare and the hounds—posing before the Society as transcendently ethical and in private practice doing the meanest of dirty little things to get patients from your brother? If so, quit and be a man.—B. H. Teague, *A. J. Dental Science*.

TO KEEP POINTS OF INSTRUMENTS CLEAN WHILE OPERATING.

BY DR. W. C. GOWAN.

(*The Dominion Dental Journal*, Toronto, Canada., July, 1908.)

How should matter which adheres to instruments in excavating, scaling, extracting, etc., be disposed of? To wipe it upon a towel or anything else about table, cabinet, chair, or person of self or patient is clearly unsatisfactory.

Without considering bacteriology, sense of decency will convince an operator that such matter should depart instantly from his presence, to be touched, seen or smelt no more. There is only one proper way for it to go, and that way lies through the fountain spittoon.

Enlarge the curve of your fountain water-cock so as to direct its stream to the waste trap in the center of the bowl instead of straight downward to the glass-holder as heretofore. Make a fine tip of brass, bone or vulcanite for the muzzle. This tip may be bored with a small engine drill, so as to discharge a fine smooth stream. Such a stream directed into the waste pipe will not spatter. Instruments held in it below the level of the bowl rim will be instantly cleaned if the proper force of water is on. Engine burrs and wheels of all kinds revolving in the handpiece may be cleaned with a facility hitherto unexpected by any operator. For wheels or large points, hold the handpiece vertical and point well below the rim to avoid spatter. A "dentate" burr when clogged requires a swifter stream and higher speed than others. Cotton leaves the pliers quickly, and all little stuff is neatly disposed of in this stream.

The advantages of this method are too obvious to need further comment. It is not intended, however, to depend on this kind of wash without a sterilizing bath before returning instruments to cabinet.

PROPER BEVELING OF MARGINS FOR INLAYS.

I think the cavity margins for inlays should be beveled about seventy degrees, rather than forty-five degrees, which we ordinarily bevel for gold fillings.—W. G. Clark, *Review*.

HEMORRHAGE AFTER TOOTH EXTRACTION,

In treating cases of serious hemorrhages after tooth extraction, it is usual to pack a strip of antiseptic gauze into the alveolus, one end of which may be dipped into a mixture of powdered thymol and powdered alum; the antiseptic action of the thymol and the powerful astringence of the alum adding valuable qualities to the gauze. Internally, calcium chlorid, ten to fifteen grains administered in water and repeated, seems to rank among the best remedies that increase the coagulability of the blood, while ergot is perhaps our best vaso-constrictor in these cases, a teaspoonful of the wine of ergot every two hours meeting the indications. When the hemorrhage has ceased, the tampon is to be carefully removed, and the case kept aseptic and watched until granulation occurs.—*Dr. Otto E. Inglis, Philadelphia, Dental Cosmos, June, 1909.*

A DENTIST'S DUTY.

It is just as much the dentist's duty to call attention to needed orthodontia work in children as it is to urge proper fillings or other work. It is just as much his duty to treat such cases as he can as to try to save what teeth he can, though the saving thereof may not always be easy or pleasant work. And there are hundreds of cases of beginning malocclusion that pass before dentists that might be treated by the man of average ability, if he only would see them. Get out your spy-glass.—*Dr. W. J. Brady in Western Dental Journal.*

If a mandrel becomes so rusted or worn that the screw no longer holds, a light blow with a hammer will flatten the hole slightly and cause the threads to hold as good as ever.—*Dr. A. C. Wittman, Review.*

To keep plaster of Paris from hardening so quickly mix it with vinegar instead of water.—*Gordon M. Backus, Popular Mechanics.*



IOWA STATE DENTAL SOCIETY.

The forty-eighth annual meeting of the Iowa State Dental Society will be held at Des Moines, May 3-4-5, 1910. Besides an especially strong program, plans are being made for a large dental manufactures' exhibit. Display space free of charge.

W. G. CRANDALL, Secretary,
Spencer, Iowa.

MONTANA STATE DENTAL SOCIETY.

I am pleased to announce that the next annual meeting of the Montana State Dental Society will be held May 6-7, 1910, in the city of Great Falls, Montana. Preparations are making for a good program and the indications are that it will be the best meeting of the sort that the profession of the state has ever held.

Sincerely,
DR. R. L. SPAULDING, Secy.-Treas.

MINNESOTA STATE BOARD.

The next regular meeting of the Minnesota State Board of Dental Examiners will be held at the Dental Department of the State University in Minneapolis on March 15, 16, and 17, 1910.

All applications must be in the hands of the Secretary ten days before. All applicants must be graduates and present their diploma. Those having practiced in any of the following states for five years or more will be exempt from the theoretical examination: Iowa, Indiana, Michigan, Nebraska, Wisconsin or Montana. Minnesota dentists are admitted to those states on same conditions.

For blanks and further information apply to the Secretary.

DR. GEO. S. TODD, Secretary.

Lake City, Minn.

RHODE ISLAND DENTAL SOCIETY.

The annual meeting of the Rhode Island Dental Society was held at Brown University, Providence, R. I., January 11. The meeting was called to order at 7:30 by the president, Dr. A. M. Potter. The reports of the secretary and chairman of the executive committee were read and accepted, as was also the report of the committee on revising the constitution, of which the most important change is the increase in the meetings of two to four. The officers elected for the ensuing year are: Dr. J. H. Manning, president; Dr. J. E. Heap, vice-president; Dr. P. A. Carr, secretary-treasurer; Drs. M. W. Malony (chairman), H. L. Dodge and H. L. Grant, executive committee.

THE SOUTHEASTERN KANSAS DENTAL SOCIETY.

The Southeastern Kansas Dental Association closed its sixth annual meeting January 19 at Parsons, Kas. Besides the splendid program of yesterday afternoon the business of the convention was rounded off by the election of the following officers: President, Dr. T. M. Robertson, Cherryvale; vice-president, Dr. W. E. Cutler, Chanute; secretary-treasurer, Dr. A. D. Lucas, Parsons.

NATIONAL ASSOCIATION OF DENTAL EXAMINERS.

The twenty-eight annual session will be held at Denver, Colorado, on Monday, August 1st, 1910, commencing at 10 a. m.

Hotels and railroad rates will be given in a later issue.

J. J. WRIGHT, D. D. S. CHARLES A. MEEKER, D. D. S.

President.

Sec'y. and Treasurer.

Wells Bldg., Milwaukee, Wis.

29 Fulton St., Newark, N. J.

INDIANA STATE DENTAL ASSOCIATION.

The fifty-second annual meeting of the Indiana State Dental Association will be held in Indianapolis, May 17-18-19, 1910, at the Claypool Hotel. This promises to be a great meeting.

OTTO U. KING, Secretary.

Huntington, Ind.

THE NATIONAL ASSOCIATION OF DENTAL EXAMINERS MEETING.

The twenty-eighth annual session of the National Association of Dental Examiners will be held at the new Savoy Hotel, Denver, Colo., commencing Monday, August 1, 1910, at 10 a. m. The rates will be \$2 per day for one and \$3 per day for two persons in room, European

plan; large room for one or two, with private bath, \$4 and \$5 per day. Meeting and committee rooms at the service of the Association free and every accommodation extended.

An early mail reservation is requested, the time being the busy season. A full representation from every state in the United States is earnestly desired.

J. J. WRIGHT, D. D. S., President,
Wells Building, Milwaukee, Wis.

CHARLES A. MEEKER, D. D. S.,
Secretary and Treasurer,
29 Fulton Street, Newark, N. J.

THE G. V. BLACK DENTAL CLUB CLINIC.

Everybody interested in advanced dentistry is cordially invited to attend the Annual Clinic of the G. V. Black Dental Club.

The meetings will be held in the old State Capitol Building, in St. Paul, on Thursday and Friday, Feb. 24th and 25th, 1910.

The program was, in part, published in the January Dental Journals, and it does not seem necessary to publish it again.

There will be operations of all kinds. A large number of men will hold table clinics.

A large number of manufacturers have reserved space and will be present to demonstrate the new things in dentistry. The profession generally is invited to attend.

For any information address, R. B. Wilson, Secretary, Amer. Nat. Bank Bldg., St. Paul, Minn.

PERSONAL AND GENERAL

Removals.—Drs. Wilson, from Burnet, Texas, to Galveston, Texas.—R. G. Anderson, from Chicago, Ill., to Belgrade, Mont.—G. M. Blair, from Barry, Ill., to Jacksonville, Ill.

Fire.—In a disastrous fire which destroyed several buildings in Grand Rapids, Mich., the Grand Rapids Dental Supply Company, which occupied one of the buildings, was damaged to the extent of \$5,000. The fire started in an adjacent furniture store.

Dentist Turns Evangelist.—Called as he confidently believes by a direct communication from Christ, George T. Lord, who has one of the largest Tacoma, Wash., dental practices, will sell out his business and devote his life to missionary work in Central America.

Two Dentists Convicted in Milwaukee.—Of two dentists recently tried, charged with illegal practice, one pleaded guilty and promised to discontinue until the state examinations, while the other, who was fined \$10, is appealing his case.

Dentist Injured in Fire.—Dr. Taft, a dentist, located in New York, was badly injured and barely escaped with his life when the building in which he is lodged was burned, and escape from his office, where he was later found unconscious, made impossible.

De Lacy-Kloss.—Dr. W. P. De Lacy, a prominent politician and dentist of Springfield, Ill., and Miss Mamie Kloss of Buffalo, N. Y., were married in Chicago January 28. They will return to make their home in Springfield within a short time.

Dental Firm Dissolves.—The dental firm of Spears and Thacker of Brazil, Ind., announced dissolution of partnership January 22. Dr. Thacker will continue in the business, while Dr. Spears will open a dental office.

Dentist's Name Forged.—Dr. F. S. Lombard, a dentist of Elgin, Ill., was notified Tuesday that his name had been affixed as an indorsement on a check cashed in Chicago. Investigation showed that it was a forgery, as Dr. Lombard had not handled the paper.

Lawyer Is Sued by Dentist.—Dr. Frank S. Buckley, a dentist of Chicago, filed a suit January 14 against W. J. Hynes, an attorney, for \$430. The suit is for dental work done between April 29, 1908, and June 13, 1908, according to the papers filed.

Robberies.—Drs. Fred Morgan of Milwaukee, Wis., loss not given.—G. S. Clemens, Joplin, Mo., loss \$25.—W. H. Eaton, Houston, Texas, loss \$50.—W. B. Corser, loss \$15.—J. O. Macbeth, loss \$125.—N. E. Heddy, St. Paul, Minn., \$40.—R. A. Stevenson, St. Paul, Minn., \$25.—

R. J. and W. C. Collum, St. Paul, Minn., \$25.—R. B. Wilson, St. Paul, Minn., \$10.—A. J. Sam, St. Paul, Minn., \$65.—S. H. Super, St. Paul, Minn., \$125.

Dentists Join Medics in Public Health Move.—The Dental Society of Fort Leavenworth, Kas., has affiliated with a local medical society in an effort to increase the standard of the city schools by taking care of the health of the pupils, which is now said to be one of the reasons for the decrease in the scholarship average.

Minneapolis Dentist Named.—Governor Eberhart of Minnesota appointed Dr. E. T. Cobb of Minneapolis, January 17, on the state board, to succeed Dr. J. W. Pemberth, also of Minneapolis, who has resigned because of poor health and who now expects to make his home in California.

Dentists Re-organize.—The Jasper County Dental Association, in a most successful meeting, held January 10, was totally reorganized and is now a district association, which takes in most of Southwestern Missouri. Members of the state board were present and more than a hundred dentists attended.

Robberies.—Drs. F. T. Snow, San Jose, Cal., loss \$40.—F. P. Wolfe, loss \$20.—G. Bienville, \$35.—J. H. Landry, loss \$40.—E. F. Woods, \$115.—Joseph & Woodward, \$50.—C. V. Vignes, \$1, New Orleans.—F. N. Morgan, Milwaukee, Wis., loss \$10.—C. A. Johnson, Milwaukee, Wis., loss \$25.

Dentist Accidentally Shot.—While cleaning a revolver Dr. Walter Mathews of Lexington, Ky., accidentally shot himself January 18 in the knee, causing an ugly wound, which will prevent his walking for quite a time, as the ball entered his left leg about three inches above the knee and is lodged underneath the knee cap.

Dental College of Richmond in Ashes.—The University College of Dentistry and Medicine of Richmond, Va., was almost totally destroyed by fire which broke out in the dental department January 6. The damage is estimated at \$250,000, only \$75,000 of which is covered by insurance. The cause of the fire is unknown.

Information Against Dentist.—For the third time within a very short time the authorities of Peoria, Ill., have started proceedings against a local dentist, who is said to be practicing without a license, this time with the evident intention of securing a conviction, as they have entered six counts against him.

Movement for Free School Clinics Rapid.—If the increase in interest and demand for the free inspection and work upon the teeth of school children continues at its present rate, it is estimated that within a year there will be very few schools in the country which are lacking in this very important feature. They have been very strongly advocated and much practical work tending for their final establishment done in Providence, R. I., Evansville, Ind., Cincinnati, Ohio, Three Rivers, Mich., and Jersey City, N. J., during the past month.

Honor Northwestern Dean.—Five hundred dentists from all states of the Union, Europe and Canada attended a testimonial banquet January 29 in honor of Dr. G. V. Black, dean of the dental department of Northwestern University, Chicago, in the gold room of the Congress hotel by the Chicago Odontographical Society. Dr. Black was eulogized by Dr. W. H. Logan and many other prominent dentists.

McLain-Graves.—Dr. David McLain, a dentist of Jamestown, N. D., and Miss Graves, of Chicago, were married January 15. Miss Graves has been a stenographer in the employ of the S. S. White Dental Supply Company. Dr. McLain is reported to have been a former Sunday school teacher of Miss Graves, and it was there that their acquaintance began.

Dentist Held Up in Lonely Valley.—For the second time within a year, Dr. Allen Austin, a dentist of Kansas City, Mo., was robbed. While on his way home, about 12 o'clock January 13, he was stopped by two robbers and at pistol point backed into a dark place, where he was systematically searched and relieved of a gold watch and a sum of money. The thieves have not been caught as yet.

Many Keep Their Teeth.—A dentist of Chicago who has kept an account of the people who ask to keep their teeth after they have had them extracted was surprised to find that more than 100 are thus given away. It is also very peculiar that grown men ask for them as well as the mothers of babies who wish to keep and preserve the teeth of their children.

Dentist Hurt in Automobile Wreck.—When the automobile in which he was riding with three companions was squarely struck by a rapidly moving engine, November 16, Dr. J. L. Hesse, a well known dentist of Clarksville, Ill., was the most seriously injured. The car was completely demolished and it is considered a miracle that the men escaped with their lives.

Sues for Million.—Dr. J. G. Hollingsworth, a dentist of Kansas City, Mo., has started litigation to recover a million dollars, which represents a half interest in a gold mine which he claims to own. Dr. Hollingsworth alleges that in 1898 he "grubstaked" E. R. Tufts of New York, in return for which he was to receive half interest in any mines discovered. Up to the present time he had heard nothing of Tufts until he saw that he had sold properties for \$2,000,000.

State Dental Board Under Fire.—Charges of a serious nature have been filed with the legislative investigation committee by a Seattle dentist against the State Board of Washington, who alleges that the board has issued certificates without examination, has taken application fees, and given no examinations, and has shown extravagance in expense money. A thorough investigation will be carried out by the legislative committee.

Removals.—Drs. C. H. Welter, from Mishawaka, Ind., to Elkhart, Ind.—E. H. Black, from Fordyce, Ark., to Texishona, Texas.—F. J. Franz, from Little Valley, N. Y., to Hornell, N. Y.—Dr. C. W. Purchell, from Lorain, Ohio, to Cleveland, Ohio.—F. L. Henderson, from Quakertown, Pa., to Coopersburg, Pa.—W. A. Townes, from Pierce City to Springfield, Mo.—Ray Peters, from Lancaster, Ohio, to Junction City, Ohio.—F. W. Wiseman, from Gerald, Wis., to Owensville, Wis.—E. W. King, from Cambridge, Ill., to Geneseo, Ill.—E. C. Lynn, from Dysart, Iowa, to Marshalltown, Iowa.

IN HONOR OF DR. D. O. M. LE CRON.

On Jan. 18th a dinner was given in St. Louis, at the hotel Jefferson, in honor of Dr. D. O. M. Le Cron, by the St. Louis Society of Dental Science.

Dr. Le Cron was presented with a beautiful loving cup, as a token of the love and esteem of his fellow practitioners. And to show their appreciation of the great service he has rendered to them and to his profession at large by the numberless experiments and excursions which he has made into the field of original research, that have contributed so largely to the present high efficiency of Dental practice.

Very truly yours,

J. P. MARSHALL, Secretary.

INTERNATIONAL DENTAL CONGRESS.

All colleagues who have taken part in the V. International Dental Congress, and who have not received the supplement of the Congress Paper, which had been sent to the members some time ago, are requested to send their names, and exact address, as well as the number of their Congress-card to the secretary of the V. International Dental Congress, Dr. med Konrad Cohn, Berlin W. 35, Potsdamerstr. 46. This only will enable us to publish an exact list of all the visitors of the Congress, and to send to the members the prints, which have been published up to the present. A great number of letters has been returned, the addresses having been indicated incompletely.

A decorative banner with ornate scrollwork and floral patterns on either side. The word "NECROLOGICAL" is written in a bold, serif, all-caps font across the center of the banner.

NECROLOGICAL

Dr. Charles W. Campbell, a dentist who has practiced in Denver, Colo., for the last thirteen years, succumbed to an attack of pneumonia January 2 after but a few days sickness. Besides being a dentist, he was a member of the Denver Chamber of Commerce and secretary of the Dental Specialty Company.

Dr. Frederick Augustus Merrill, one of the most prominent and early dentists of Boston, Mass., died after a short siege of pneumonia. After graduating from the Harvard Dental College in 1874, he practiced there continually until the time of his death at the age of 60, January 1. He was a Mason and a member of the Society of Colonial Wars.

Dr. Alphonse Peyroux, a practicing dentist in Carrolltown, La., died after an extended illness of several months, January 13, at the age of thirty-six. Dr. Peyroux was one of the best experienced and most faithful employes of the New Orleans post office, having worked there for eighteen years. It was during this time that he obtained his D. D. S., after completing a three-year course at the New Orleans College of Dentistry. His death is said to be due to over-taxation during this time.

Dr. Louis J. Kerwin, a prominent young dentist of Cupertino, Cal., died at his home there January 10. Dr. Kerwin was a native of California and his father is said to be one of the earliest settlers in that state.

Dr. G. J. Horning, a highly esteemed citizen of Newark, N. J., died as the result of a sudden attack of heart failure, January 17, at the age of forty-five. He has practiced at his present location for twenty-three years, following his graduation at St. Peter's College. He was prominent in local societies, being a member of very numerous secret societies and several clubs.

Dr. Sylvester R. Adams, aged 71, one of the oldest practicing dentists of Boston, Mass., and later of Chelsea, Mass., was drowned there January 1. He is said to have practiced continuously for more than fifty-two years, and is well known for his charitable acts and has contributed generously to philanthropic works. He was a member of numerous secret societies and organizations and was very prominent in work of that character.

Dr. A. H. Dainey, a popular dentist of Centralia, Ill., died January 23 of heart failure at his home. Dr. Rainey was very prominent in Southern Illinois politics and was a very strong supporter of former Governor Yates. During his twenty years as a dentist in Centralia he was known for his support of and many gifts to charity.

CLASSIFIED ADVERTISEMENTS

ILLINOS CIVIL SERVICE COMMISSION.

Examinations will be held for the following positions in the State Charitable Institutions at 9 a. m. Wednesday, March 30, 1910.

Dental Interne: Open to men and women over 21. Scope and weights: Anatomy of the Head and Neck, Dental Anatomy, Operative Dentistry, Prosthetic Dentistry, Dental Pathology, Oral Surgery and Oral Hygiene 7. Experience 3.

Pharmacist: Open to regularly licensed Pharmacists over 21. Experience 4; Technical questions on pharmacy 6.

Engineer: Open to men over 23. Experience 3; Mechanical Ability, Steamfitting and Electrical work 3; Boiler Room Practice, Steam Engines and their care, Steam Heating 3; English Branches 1.

The above examinations will be held in the following cities: Chicago, Elgin, Kankakee, Watertown, Peoria, Jacksonville, Lincoln, Anna, Aurora, Belleville, Bloomington, Cairo, Canton, Centralia, Clinton, Charleston, Effingham, Galesburg, Golconda, Harrisburg, Macomb, Marion, Mt. Carmel, Mt. Vernon, Olney, Ottawa, Pana, Paris, Paxton, Quincy, Rockford, Sterling, Urbana, Springfield and Vandalia.

Requests for applications should be addressed to the Illinois Civil Service Commission, Springfield. All applications must be filed by March 23.

JOSEPH C. MASON, Chief Examiner.

Springfield, Ill., Jan. 21, 1910.

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